SECTION 27 41 16

INTEGRATED AUDIO-VIDEO SYSTEMS AND EQUIPMENT

GUIDE SPECIFICATION

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Specifier: Please see PART 4 for a listing of products specified in this Guide Specification.

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1. GENERAL

NOT USED in this Guide Specification. Specifier shall Specify PART 1 administrative and procedural requirements as needed.

1. PRODUCTS
	1. CEILING SPEAKER TYPE 1:

Specifier Note: The Saros Express ICE4T model is a 2-way in-ceiling speaker featuring a 4 inch woofer and wide-dispersion, horn-loaded 3/4 inch dome tweeter. Saros® Express speakers by Crestron® deliver easy installation and excellent performance in a range of popular sizes for cost-sensitive commercial applications.

* + 1. Basis of Design:
			1. **Crestron SAROS ICE4T**
		2. Device Architecture
			1. Enclosure material: Zinc-plated steel, plenum rated.
			2. Baffle: ABS UL94V-0 plastic.
			3. Grille:
				1. Steel
				2. Magnetically held frameless design
				3. White or black textured finish, paintable
			4. Mounting:
				1. Flush ceiling mount.
				2. Four integral two-step toggle mounting clamps.
				3. Maximum ceiling thickness: 2.4 inches (61 mm).
				4. Cutout diameter: 7.75 inches (197 mm).
				5. Minimum ceiling cavity depth: 6.9 inches (176 mm).
			5. Environmental Operating Conditions:
				1. Temperature: -2° to 120°F (-19° to 49°C)
				2. Humidity: 5% to 95% RH (non-condensing)
			6. Included Accessories:
				1. Support bridge for tile ceiling installation.

Adjustable for off center installation.

* + - 1. Optional Accessories:
				1. Safety Tether

Have a minimum of two (2) safety wire installation points.

* + - * 1. Black Grille
			1. Termination:
				1. 4-pin 5 mm screw down conductor detachable terminal block with speaker input and parallel pass-through connections.
				2. Maximum wire size: 12 AWG.
				3. Conduit knockouts:

One 0.5-inch knockout.

One 0.75-inch knockout.

* + - 1. Dimensions:
				1. Diameter: 8.53 inches (217 mm), not including toggles.
				2. Depth: 7.13 inches (181 mm).
			2. Weight: 7.0 lb. (3.2 kg)
			3. Drivers:
				1. 4-inch (102 mm) treated paper woofer with ring mode decoupled cloth surround and steel basket
				2. .79-inch (20 mm) treated cloth dome horn loaded tweeter
		1. Functions
			1. Speaker unit shall be equipped for Low Impedance 8 Ω or High Impedance 70 V or 100 V operation.
				1. Accessible front mounted low impedance, high impedance selector switch.
			2. High Impedance Line Transformer:
				1. Four level taps at 70 V:

3.75 Watts

7.5 Watts

15 Watts

30 Watts

* + - * 1. Three level taps at 100 V:

7.5 Watts

15 Watts

30 Watts

* + - * 1. Low Impedance transformer by-passed:

8 Ω

* + - 1. Sensitivity: 89 dB at 1 W, 1 m away.
			2. Frequency Response: Within plus or minus 3 dB from 85 to 20,000 Hz.
			3. Frequency Range: Within minus 10 dB from 75 to 20,000 Hz.
			4. Crossover Frequency: 2 kHz
			5. Nominal Coverage: 95 degrees conical.
			6. Power Handling: 40 Watts Program at 8 Ω.
		1. Compliance
			1. UL Listed for US & Canada
				1. UL 1480
				2. UL 2043
			2. CE
			3. FCC Part 15 Class B
	1. CEILING SPEAKER TYPE 2:

Specifier Note: The Saros Express ICE6T model is a 2-way in-ceiling speaker featuring a 6-1/2 inch woofer and wide-dispersion, horn-loaded 1 inch dome tweeter. Saros® Express speakers by Crestron® deliver easy installation and excellent performance in a range of popular sizes for cost-sensitive commercial applications.

* + 1. Basis of Design:
			1. **Crestron SAROS ICE6T**
		2. Device Architecture
			1. Enclosure material: Zinc-plated steel, plenum rated.
			2. Baffle: ABS UL94V-0 plastic.
			3. Grille:
				1. Steel
				2. Magnetically held frameless design
				3. White or black textured finish, paintable
			4. Mounting:
				1. Flush ceiling mount.
				2. Four integral two-step toggle mounting clamps.
				3. Maximum ceiling thickness: 2.4 inches (61 mm).
				4. Cutout diameter: 9.875 inches (250 mm).
				5. Minimum ceiling cavity depth: 8.1 inches (206 mm).
			5. Environmental Operating Conditions:
				1. Temperature: -2° to 120°F (-19° to 49°C)
				2. Humidity: 5% to 95% RH (non-condensing)
			6. Included Accessories:
				1. Support bridge for tile ceiling installation.

Adjustable for off center installation.

* + - 1. Optional Accessories:
				1. Safety Tether

Have a minimum of two (2) safety wire installation points.

* + - * 1. Black Grille
			1. Termination:
				1. 4-pin 5 mm screw down conductor detachable terminal block with speaker input and parallel pass-through connections.
				2. Maximum wire size: 12 AWG.
				3. Conduit knockouts:

One 0.5-inch knockout.

One 0.75-inch knockout.

* + - 1. Dimensions:
				1. Diameter: 10.57 inches (269 mm), not including mounting dogs.
				2. Depth: 8.31 inches (211 mm).
			2. Weight: 10.0 lb. (4.5 kg)
			3. Drivers:
				1. 6-inch (165 mm) treated paper woofer with ring mode decoupled cloth surround and steel basket

.98-inch (25 mm) treated cloth dome horn loaded tweeter

* + 1. Functions
			1. Speaker unit shall be equipped for Low Impedance 8 Ω or High Impedance 70 V or 100 V operation.
				1. Accessible front mounted low impedance, high impedance selector switch.
			2. High Impedance Line Transformer:
				1. Four level taps at 70 V:

3.75 Watts

7.5 Watts

15 Watts

30 Watts

* + - * 1. Three level taps at 100 V:

7.5 Watts

15 Watts

30 Watts

* + - * 1. Low Impedance transformer by-passed:

8 Ω

* + - 1. Sensitivity: 89 dB at 1 W, 1 m away.
			2. Frequency Response: Within plus or minus 3 dB from 75 to 20,000 Hz.
			3. Frequency Range: Within minus 10 dB from 60 to 20,000 Hz.
			4. Crossover Frequency: 2.5 kHz.
			5. Nominal Coverage: 95 degrees conical.
			6. Power Handling: 60 Watts Program at 8 Ω.
		1. Compliance
			1. UL Listed for US & Canada
				1. UL 1480
				2. UL 1480A
				3. UL 2043
			2. CE
			3. FCC Part 15 Class B
	1. CEILING SPEAKER TYPE 3:

Specifier Note: The Saros Express ICE6LPT model is a 2-way in-ceiling speaker featuring a 6-1/2 inch woofer and wide-dispersion, horn-loaded 1 inch dome tweeter. Its low-profile enclosure allows for installation in constricted ceiling spaces as shallow as 5-1/8 inches (130 mm). Saros® Express speakers by Crestron® deliver easy installation and excellent performance in a range of popular sizes for cost-sensitive commercial applications.

* + 1. Basis of Design:
			1. **Crestron SAROS ICE6LPT**
		2. Device Architecture
			1. Enclosure material: Zinc-plated steel, plenum rated with side entry cable clamp
			2. Baffle:
				1. ABS UL94V-0 plastic.
			3. Grille:
				1. Steel
				2. Magnetically held frameless design
				3. White textured finish, paintable
			4. Mounting:
				1. Flush ceiling mount.
				2. Four integral two-step toggle clamps
				3. Maximum ceiling thickness: 2.4 inches.
				4. Recommended cutout diameter: 9.875 inches.
				5. Minimum ceiling cavity depth: 5.2 inches.
			5. Environmental Operating Conditions:
				1. Temperature: -2° to 120°F (-19° to 49°C)
				2. Humidity: 5% to 95% RH (non-condensing)
			6. Included Accessories:
				1. Support bridge for tile ceiling installation.

Adjustable for off center installation.

* + - 1. Optional Accessories:
				1. Safety Tether

Have a minimum of two (2) safety wire installation points.

* + - * 1. Black Grille
			1. Termination:
				1. 4-pin 5 mm screw down conductor detachable terminal block with speaker input and parallel pass-through connections.
				2. Maximum wire size: 12 AWG.
			2. Dimensions:
				1. Diameter: 10.64 inches, not including mounting dogs.
				2. Depth: 5.30 inches.
			3. Weight: 9.2 lb.
			4. Drivers:
				1. 6.5-inch (165 mm) treated paper woofer with ring mode decoupled cloth surround and steel basket
				2. .98-inch (25 mm) treated cloth dome horn loaded tweeter
		1. Functions
			1. Speaker unit shall be equipped for Low Impedance 8 Ω or High Impedance 70 V or 100 V operation.
				1. Accessible front mounted low impedance, high impedance selector switch.
			2. High Impedance Line Transformer:
				1. Four level taps at 70 V:

3.75 Watts

7.5 Watts

15 Watts

30 Watts

* + - * 1. Three level taps at 100 V:

7.5 Watts

15 Watts

30 Watts

* + - * 1. Low Impedance transformer:

8 Ω

* + - 1. Sensitivity: 89 dB at 1 W, 1 m away.
			2. Frequency Response: Within plus or minus 3 dB from 85 to 20,000 Hz.
			3. Frequency Range: Within minus 10 dB from 70 to 20,000 Hz.
			4. Crossover frequency: 2.5 kHz.
			5. Nominal Coverage: 95 degrees conical.
			6. Power Handling: 60 W program at 8 Ω
		1. Compliance
			1. UL Listed for US & Canada
				1. UL 1480
				2. UL 1480A
				3. UL 2043
			2. CE
			3. FCC Part 15 Class B
	1. CEILING SPEAKER TYPE 4:

Specifier Note: The Saros Express ICE8T model is a 2-way in-ceiling speaker featuring an 8 inch woofer and wide-dispersion, horn-loaded 1 inch dome tweeter. Saros® Express speakers by Crestron® deliver easy installation and excellent performance in a range of popular sizes for cost-sensitive commercial applications.

* + 1. Basis of Design:
			1. **Crestron SAROS ICE8T**
		2. Device Architecture
			1. Enclosure material: Zinc-plated steel, plenum rated.
			2. Baffle: ABS UL94V-0 plastic.
			3. Grille:
				1. Steel
				2. Magnetically held frameless design
				3. White textured finish, paintable
			4. Mounting:
				1. Flush ceiling mount.
				2. Four integral two-step toggle mounting clamps.
				3. Maximum ceiling thickness: 2.4 inches (61 mm).
				4. Cutout diameter: 11.3125 inches (287 mm).
				5. Minimum ceiling cavity depth: 8.9 inches (226 mm).
			5. Environmental Operating Conditions:
				1. Temperature: -2° to 120°F (-19° to 49°C)
				2. Humidity: 5% to 95% RH (non-condensing)
			6. Included Accessories:
				1. Support bridge for tile ceiling installation.

Adjustable for off center installation.

* + - 1. Optional Accessories:
				1. Safety Tether

Have a minimum of two (2) safety wire installation points.

* + - * 1. Black Grille
			1. Termination:
				1. 4-pin 5 mm screw down conductor detachable terminal block with speaker input and parallel pass-through connections.
				2. Maximum wire size: 12 AWG.
				3. Conduit knockouts:

One 0.5-inch knockout.

One 0.75-inch knockout.

* + - 1. Dimensions:
				1. Diameter: 12.07 inches (307 mm), not including toggles.
				2. Depth: 9.10 inches (231 mm).
			2. Weight: 12.2 lb (5.7 kg).
			3. Drivers:
				1. 8-inch (203 mm) treated paper woofer with ring mode decoupled cloth surround and steel basket
				2. .98-inch (25 mm) treated cloth dome horn loaded tweeter
		1. Functions
			1. Speaker unit shall be equipped for Low Impedance 8 Ω or High Impedance 70 V or 100 V operation.
				1. Accessible front mounted low impedance, high impedance selector switch.
			2. High Impedance Line Transformer:
				1. Five level taps at 70 V:

3.75 Watts

7.5 Watts

15 Watts

30 Watts

60 Watts

* + - * 1. Four level taps at 100 V:

7.5 Watts

15 Watts

30 Watts

60 Watts

* + - * 1. Low Impedance transformer by-passed:

8 Ω

* + - 1. Sensitivity: 89 dB at 1 W, 1 m away.
			2. Frequency Response: Within plus or minus 3 dB from 70 to 20,000 Hz.
			3. Frequency Range: Within minus 10 dB from 55 to 20,000 Hz.
			4. Crossover Frequency: 2.5 kHz
			5. Nominal Coverage: 95 degrees conical.
			6. Power Handling: 75 Watts Program at 8 Ω.
		1. Compliance
			1. UL Listed for US & Canada
				1. UL 1480
				2. UL 1480A
				3. UL 2043
			2. CE
			3. FCC Part 15 Class B
	1. CEILING SPEAKER TYPE 5:

Specifier Note: The Saros Express ICE8LPT model is a 2-way in-ceiling speaker featuring an 8 inch woofer and wide-dispersion, horn-loaded 1 inch dome tweeter. Its low-profile enclosure allows for installation in constricted ceiling spaces as shallow as 5-1/8 inches (130 mm). Saros® Express speakers by Crestron® deliver easy installation and excellent performance in a range of popular sizes for cost-sensitive commercial applications.

* + 1. Basis of Design Product:
			1. **Crestron SAROS ICE8LPT**
		2. Device Architecture
			1. Enclosure material: Zinc-plated steel, plenum rated with side entry cable clamp
			2. Baffle: ABS UL94V-0 plastic.
			3. Grille:
				1. Steel
				2. Magnetically held frameless design
				3. White textured finish, paintable
			4. Mounting:
				1. Flush ceiling mount.
				2. Four integral two-step toggle clamps
				3. Maximum ceiling thickness: 2.4 inches (61 mm).
				4. Recommended cutout diameter: 11.3125 inches (287 mm).
				5. Minimum ceiling cavity depth: 5.2 inches (130 mm).
			5. Environmental Operating Conditions:
				1. Temperature: -2° to 120°F (-19° to 49°C)
				2. Humidity: 5% to 95% RH (non-condensing)
			6. Included Accessories:
				1. Support bridge for tile ceiling installation.

Adjustable for off center installation.

* + - 1. Optional Accessories:
				1. Safety Tether

Have a minimum of two (2) safety wire installation points.

* + - * 1. Black Grille
			1. Termination:
				1. 4-pin 5 mm screw down conductor detachable terminal block with speaker input and parallel pass-through connections.
				2. Maximum wire size: 12 AWG.
			2. Dimensions:
				1. Diameter: 12.13 inches (308 mm), not including mounting dogs
				2. Depth: 5.30 inches (135 mm).
			3. Weight: 10.8 lb. (4.9 kg)
			4. Drivers:
				1. 8-inch (203 mm) treated paper woofer with ring mode decoupled cloth surround and steel basket
				2. .98-inch (25 mm) treated cloth dome horn loaded tweeter
		1. Functions
			1. Speaker unit shall be equipped for Low Impedance 8 Ω or High Impedance 70 V or 100 V operation.
				1. Accessible front mounted low impedance, high impedance selector switch.
			2. High Impedance Line Transformer:
				1. Four level taps at 70 V:

3.75 Watts

7.5 Watts

15 Watts

30 Watts

* + - * 1. Four level taps at 100 V:

7.5 Watts

15 Watts

30 Watts

* + - * 1. Low Impedance transformer:

8 Ω

* + - 1. Sensitivity: 89 dB at 1 W, 1 m away.
			2. Frequency Response: Within plus or minus 3 dB from 80 to 20,000 Hz.
			3. Frequency Range: Within minus 10 dB from 65 to 20,000 Hz.
			4. Crossover frequency: 2.5 kHz.
			5. Nominal Coverage: 95 degrees conical.
			6. Power Handling: 60 W program at 8 Ω
		1. Compliance
			1. UL Listed for US & Canada
				1. UL 1480
				2. UL 1480A
				3. UL 2043
			2. CE
			3. FCC Part 15 Class B
1. EXECUTION

NOT USED in this Guide Specification. Specifier shall Specify PART 3 On-Site work as needed.

1. APPENDICES
	1. SPECIFIED PRODUCTS
		1. Crestron SAROS ICE4T
		2. Crestron SAROS ICE6T
		3. Crestron SAROS ICE6LPT
		4. Crestron SAROS ICE8T
		5. Crestron SAROS ICE8LPT